

# APPENDIX P - Preparation Guidelines for Project Scope Summary Report (Structure Rehabilitation)

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# APPENDIX P - Preparation Guidelines for Project Scope Summary Report (Structure Rehabilitation)

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## ARTICLE 1 - Overview

### **Use of Project Scope Summary Report (Structure Rehabilitation)**

These guidelines provide information to be used with the procedures described in Chapter 9, Article 5, of the *Project Development Procedures Manual* for structure rehabilitation projects. All structure rehabilitation projects are funded from the HA21 Program. The Project Scope Summary Report (PSSR) for structure rehabilitation projects satisfies the requirements for both the Project Study Report (PSR) and the Project Report (PR) for projects in the HA21 Program. When the PSSR (Structure Rehabilitation) form is completed and approved by the District Director or their designee and a Categorical Exemption/Exclusion Form or draft environmental document is attached, it serves as the project approval document.

The district is responsible for initiating and developing PSSR's for HA21 projects. District Design Unit, with assistance from the Engineering Service Center Division of Structures, should jointly do the scoping and cost estimating for the selected projects. Expenditure authorizations should be secured in the same manner as PSR's.

Since the PSSR is used as the primary project reference document by both Headquarters and the District, the need for accurate and complete project information is essential.

### **Project Coordination**

The scope of the structure improvements proposed for a structure rehabilitation project is often influenced by potential impacts on the surrounding land and development. This is especially true for non freeway RRR projects. Social, environmental, and economic impacts may influence the scope of a rehabilitation project. This is particularly true where existing right of way is narrow and adjacent development is extensive. Complex projects may require extensive Right of Way Branch and Environmental Unit involvement. It is important that those units become involved in complex projects as early as possible in the project development process to avoid potential delays in project delivery and to identify potential changes in project scope, which may result in project cost increases.

## **Design Field Review**

It is necessary to field review all rehabilitation projects. Rehabilitation projects are usually difficult to scope and to obtain accurate design information on, unless the project is field reviewed. All project field reviews must be documented since the project development process usually takes a period of years to complete and project personnel change. Decisions and agreements made during the early phases of the process need to be documented and retained in the project files for future reference. It is important to field review all rehabilitation projects so that reliable project scope and cost estimates can be developed early in the project development process.

## **Scoping Team**

A scoping team staffed at the discretion of the District should field review structure rehabilitation (HA21) projects. The composition of the team will vary in accordance with the complexity of the project. As a minimum, a representative of the Engineering Service Center Division of Structures (ESC-DOS) (usually the HA21 Program Advisor) will be invited. The PSSR (Structure Rehabilitation) form will be used during the project scoping process. The form should be completed by the District using information compiled prior to the scoping field review and must be furnished to each of the participants in advance of the scoping field review for their review and comments.

# **ARTICLE 2 - Guidelines for Completing the PSSR (Structure Rehabilitation) Form**

## **General**

The PSSR (Structure Rehabilitation) format is a "fill-in the blanks" type of report. The information needed to be supplied should be fairly self-explanatory from reading the form. The following background information is being provided to supplement those sections of the report that require additional guidance.

## **Cover Sheet**

All PSSRs should have a standard cover sheet to provide project identification information and signatures. Information to be provided includes the following:

- Title

Indicate "Project Scope Summary Report (Structure Rehabilitation)".

- File Reference

District-County-Route-Kilometer Post (Post Mile) [Dist-Co-Rte-KP(PM)]

The Kilometer Post should be given to the nearest 0.1 kilometer; if the project is 0.2 kilometers or more in length, give both the beginning and ending Kilometer Posts. Post Miles should follow Kilometer Posts if needed for continuity of file references or other reasons.

Responsible Unit (RU)

The unit source code of the registered civil engineer in charge of the technical features of the project.

Expenditure Authorization (EA)

The multiphase EA, using the "0" phase for the project.

Month Year

Give the month and the year the report is being prepared.

- Vicinity Map

Refer to the discussion on Strip Map under Number 17.

- On Route \_\_\_\_\_ From \_\_\_\_\_ To \_\_\_\_\_

A brief written description of the project limits that corresponds to the Kilometer Posts given above and ties the limits to commonly known physical features on the ground that can be identified on available mapping.

- Right of Way Certification

The statement shown must be used (and signed by the District Division Chief for Right of Way) indicating the review of the right-of-way information contained in the PSSR and the R/W data sheet attached to it, and a finding that the data is complete, current and accurate.

- Recommended Approval

A recommendation for approval must be signed by the Project Manager as an indication that all appropriate studies have been included and as an indication that the proposal is in accord with Caltrans' policies.

- Approval

The approval of the PSSR recommendations, signed and dated by the District Director or their designee. The date of signing becomes the official project approval date.

## **Registered Civil Engineer's Stamp and Statement**

The second page of the PSSR (Structure Rehabilitation) contains the required stamp or seal and signature of a registered civil engineer who is the person in responsible charge. The sheet must include a statement indicating that the registered engineer attests to the technical information contained herein and the data upon which recommendations, conclusions, and decisions are based. Approval of the PSSR is a management decision and is separate from this technical signature of the person in responsible charge.

### **2. BRIEF PROJECT DESCRIPTION**

A one to two sentence summary of the scope of work proposed by the PSSR.

### **3. ENVIRONMENTAL STATUS**

If the proposed project is categorically exempt and/or categorically excluded, the PSSR should so indicate and the approval date documented. Before approving a PSSR containing a CE statement, the individual having authority to approve the project will have in hand the CE Determination form signed by the Environmental Unit Chief and the functional unit Division Chief. The individual approving the project will then review the project to be certain that there have been no changes that affect the exemption determination and check that the project descriptions on the CE Determination form and in the PSSR correspond to each other. If there is any question, the Environmental Unit Chief must be consulted. The CE Determination form, when required, is a required attachment to the PSSR.

### **4. TRAFFIC DATA**

Provide the information requested.

#### **Traffic Volumes and Characteristics**

Traffic data is needed in the design of all highway projects, including structure rehabilitation projects. It is an important consideration both in the determination of the appropriate level of improvement (i.e. : reconstruction vs. rehabilitation) and in the selection of values for various geometric elements. For rehabilitation projects, the need for a formal forecast of future traffic is greatest when the current traffic is approaching the capacity of the highway, and decisions must be made regarding the timing of a major improvement such as additional lanes. Rehabilitation projects should normally be designed on the basis of current average daily traffic (ADT) and current peak period design hourly volume (DHV) to extend the structural section service life for at least 10 years. Studies to predict future traffic are not normally necessary on very low volume roads since even high percentage increases in traffic do not significantly impact design decisions.

#### **Accident Data**

Evaluation of accident data often reveals situations that require attention. In addition, relative accident rates can be an important factor in establishing the scope of a

rehabilitation project. A review of accident records is an integral part of the structure rehabilitation project development process and shall be included as part of the project Safety Analysis.

### **Safety Enhancements**

To guarantee that structure rehabilitation projects address safety enhancement, all structure rehabilitation projects are to include a Safety Analysis (see Chapter 9, Article 5). The analysis is to be documented in a separate report. The Safety Analysis is not to be attached to the PSSR.

Safety enhancement by implementing cost-effective safety improvements is an essential consideration on rehabilitation projects. The fact that there is a rehabilitation project being designed provides an opportunity to do safety-related upgrading. Certain upgradings for safety and operational purposes are necessary and others are desirable. Rehabilitation projects are to be developed in a manner which considers both the necessary and the desirable safety upgradings. Necessary safety upgrades shall be included in rehabilitation projects while desirable safety upgrades may be included as appropriate (if a desirable safety upgrade can be made at a reasonable cost).

Special emphasis should be placed on implementing cost-effective solutions for safety upgradings. When upgrading of geometric features for safety or operational improvements becomes a major factor in project costs or impacts, the project becomes "reconstruction" (the fourth R). Reconstruction design criteria are covered by new construction standards shown in the *Highway Design Manual* (HDM).

## **5. ROADWAY GEOMETRIC INFORMATION**

Provide the information requested.

The physical characteristics of a highway and its general location often determine what improvements are necessary, desirable, possible, practical, or cost effective. Topography, climate, adjacent development, existing horizontal and vertical alignment, sight distance, cross section (pavement width, shoulder width, cross slope, side slope, etc.), and similar characteristics should be considered in determining the scope of geometric or safety improvements to be made in conjunction with the RRR work.

In addition, the existing pavement condition and the scope of needed pavement improvements dictate to a large extent, what improvements are feasible, prudent, or practical. More significant geometric upgrading might be appropriate if the pavement improvements are substantial, but may not be appropriate or economical if the needed pavement improvements are relatively minor.

Conversely, the existing geometric condition and the scope of needed geometric improvements often influence the scope of pavement improvements. The geometric deficiencies may be so severe that the overall highway improvements must be more substantial in order to facilitate the necessary geometric improvements. A point may be reached, however, where even with substantial geometric deficiencies, the economic and environmental constraints preclude making the improvements indicated by the criteria presented in the HDM and Design Information Bulletin (DIB) 79 - "RRR Design

Criteria". A judgment decision must then be made as to whether the need for the project requires proceeding with less than desirable rehabilitation efforts. These cases will require justification and approval in the PSSR.

## **6. STRUCTURES INFORMATION**

Provide the information requested.

Structure rehabilitation projects may include such items of work necessary to return an existing bridge and appurtenances to a condition of structural and functional adequacy. Structure rehabilitation projects may also include strengthening, scour mitigation, upgrading for seismic retrofit purposes and appurtenances for safety purposes.

See HDM Index 307.3 and DIB 79 for details on bridge (lane and shoulder) width criteria. Exceptions require that an Exception to Mandatory Design Standards be granted as outlined in Chapter 21.

## **9. COST ESTIMATE**

Include a cost breakdown for each of the major elements of the project by providing the information requested.

To minimize future cost increases, a thorough scoping of the project needs to be done during the design field review and a reliable project cost estimate needs to be prepared. Unreliable cost estimates result in severe problems in Caltrans' programming and budgeting, and in local and regional planning. Realistic evaluations as to the final concept, scope, and cost of each project are to be established as early as possible and should be based on the results of the design field review. All anticipated work (i.e.: safety, restoration, hardware modification, etc.) should be included. The project cost estimate should be prepared using the methodology presented in the outline.

Districts should, in coordination with the ESC-DOS, base their cost estimates on experience with similar projects and available historical data. See Chapter 20 and Appendix AA for further details on estimating project costs. The cost estimate for the project should be escalated at the rate used in the planning program for major construction.

Unless the particulars of a specific case justify use of a different factor, a 20% contingency factor should be used.

## **14A. & 14B. REVIEWS**

Summarize all major reviews and coordinations within Caltrans and with other interested agencies. Indicate yes or no, the appropriate individual and the date. Indicate type of federal involvement, i.e., exempt, certification acceptance, or project by project.

Approval of exceptions to mandatory design standards is the responsibility of the Design and Local Programs Program (DLPP). This is accomplished via the Mandatory Design Standard Fact Sheet process (see Chapter 21 and Appendix BB). Approval of exceptions to mandatory design standards must be sought as early as possible in the project

development process, especially where project concept and/or cost estimate depend on the proposed design exceptions. As soon as nonstandard design features are identified, the PD Coordinator or the Geometric Reviewer should be contacted to discuss the proposed nonstandard features. All nonstandard advisory design standards shall be handled in accordance with the District's approved procedures.

## **16. PROJECT SUPPORT**

Include estimated PY effort and other support costs of project development and construction from the time the project is initially programmed through the final stages of construction. The proposed schedule should be based upon when the District realistically expects that the project would be programmed, typically in the last two years of the program. This information is not required for Minor projects.

The cost of any specialty contracts or other atypical direct project costs which may be required for the project should also be estimated by the proposed fiscal year. Do not include costs for PY estimates. The Project Management Program (PMP) will establish average dollar costs per PY for various functions, including salary, benefits, CADD usage, travel and other direct costs. Once a project is about to be programmed, these rates will be applied to the estimated PY effort by PMP to establish the project's support budget.

## **18. LIST OF ATTACHMENTS**

- Strip map (may be eliminated if Vicinity Map on Cover Sheet is adequate)

A small map showing the project limits consistent with the brief description and Kilometer Posts, and a north arrow. The map should be sufficient to locate the project at a glance for a person unfamiliar with the project. It should show the features used to identify the project limits such as roads, streams, junctions or railroads, and the nearest town (unless too distant), and a note indicating the direction to and name of the next town in each direction. In addition if appropriate to understanding the proposed work, pertinent project features may be shown on the Strip Map, but not on the Vicinity Map.

- Advanced Planning Study

An Advanced Planning Study should be attached for each structure on which rehabilitation work is proposed. Contact the ESC Project Functional Manager for details.





Dist - Co - Rte, KP(PM)  
RU - EA  
RAS - HA21 Program  
Month/Year

## PROJECT SCOPE SUMMARY REPORT (Structure Rehabilitation)

### Vicinity Map

Show:

- Project limits
- North Arrow

On Route \_\_\_\_\_

From \_\_\_\_\_

To \_\_\_\_\_

*I have reviewed the right of way information contained in this Project Scope Summary Report and the R/W Data Sheet attached hereto, and find the data to be complete, current, and accurate:*

\_\_\_\_\_  
*DISTRICT DIVISION CHIEF – RIGHT OF WAY*

APPROVAL RECOMMENDED:

\_\_\_\_\_  
*PROJECT MANAGER*

APPROVED:

\_\_\_\_\_  
*DISTRICT DIRECTOR*

\_\_\_\_\_  
*DATE*

Dist - Co - Rte, KP(PM)

This Project Scope Summary Report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

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*REGISTERED CIVIL ENGINEER*

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*DATE*



## Outline For PROJECT SCOPE SUMMARY REPORT (Structure Rehabilitation)

1. Project Limits [Dist., Co., Rte., KP(PM)]: \_\_\_\_\_
2. Brief Project Description:  
\_\_\_\_\_  
\_\_\_\_\_
3. Priority Index Number (PIN): \_\_\_\_\_
4. Environmental Status: \_\_\_\_\_  
Date Approved: \_\_\_\_\_
5. Traffic Data  
Present ADT \_\_\_\_\_ 10-Year ADT \_\_\_\_\_  
DHV \_\_\_\_\_ % Trucks \_\_\_\_\_  
T.I. (10 Year) \_\_\_\_\_ Safety Field Review \_\_\_\_\_  
(date)  
Latest 3-Year Accident Data: \_\_\_\_\_  
(average vs. actual rates)  
Location(s) of Accident Concentration: \_\_\_\_\_  
Corrective Strategy: \_\_\_\_\_

### 6. Roadway Geometric Information

Facility	Minimum Curve	Through Traffic Lanes			Paved Shoulder Width		Median Width	Median Barrier
		No. of Lanes	Lane Width	Type (AC, PCC, or AC over PCC)	Left	Right		Yes or No
*								
**								
Min. 3R Stds.								

\* Enter EXISTING Kilometer Post limits (Expand as needed, for varied geometrics.)

\*\* Enter PROPOSED Kilometer Post limits (Expand as needed, for varied geometrics.)

Remarks (If 3R Standards not being met, briefly explain why, and provide exception approval date. Note: An "Exception to Mandatory Design Standards Fact Sheet" must be completed.):

7. Structures Information

Structure	Width Between Curbs			Standards Met?		Vertical Clearance Over Main-Line			Existing Condition	
				Bridge Rail	Bridge Approach Rail				Bridge Approach Slab	AC Overlay
Name/No.	Exist	3R Std	Prop	Yes or No		Exist	3R Std	Prop	Yes or No	

Remarks (If 3R Standards not being met, briefly explain why, and provide exception approval date. Note: An "Exception to Mandatory Design Standards Fact Sheet" must be completed.):

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8. Background:

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9. Need and Project Proposal:

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10. Environmental Issues:

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11. Cost Estimate Breakdown

STRAIN and other Structural Work (by Structure)		<u>Yes/No</u>	<u>*Cost</u>
(A)	Replace	_____	_____
(B)	Rehab		
(a)	Deck	_____	_____
(b)	Superstructure	_____	_____
(c)	Substructure	_____	_____
(d)	Joints	_____	_____
(e)	Bearings	_____	_____
(f)	Other	_____	_____
(C)	Scour Correction	_____	_____
(D)	Painting	_____	_____
(E)	Widening	_____	_____
(F)	Rail Replacement (without widening)	_____	_____
(G)	Strengthen	_____	_____
(H)	Seismic Retrofit	_____	_____
(I)	Vertical Clearance Adjustment	_____	_____
(J)	Drainage Rehab	_____	_____
(K)	Other **	_____	_____

**STRUCTURE COSTS SUBTOTAL**

District Work

(A)	Traffic Control	_____	_____
(B)	Pavement (include remove and replace)	_____	_____
(C)	Bridge Approach Slab	_____	_____
(D)	Bridge Approach Guardrail	_____	_____
(E)	Drainage Adjustment and Rehab	_____	_____
(F)	Rock Slope Protection	_____	_____
(G)	Utility Relocation	_____	_____
(H)	Railroad Agreements	_____	_____
(I)	Right of Way	_____	_____
(J)	Environmental Mitigation	_____	_____
(K)	Other (i.e. Hazardous Waste Mitigation, etc.)**	_____	_____

**DISTRICT COSTS SUBTOTAL**

**SUM OF SUBTOTALS**

**20% Contingency**

**TOTAL PROJECT COST**

Notes:   \*   If duplicated in other items, show cost in parenthesis. Do not include support costs.  
           \*\*   Add additional lines as necessary. Do not include support costs.

12. Other Agencies Involved (Permits/Approvals from Fish & Game, Corps of Engineers, Coastal Commission, etc.):

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13. Other Considerations

Hazardous waste disposal site required? If yes, where are sites?

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Materials and or disposal site needs and availability?

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Utility Involvement

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Railroad Involvement

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Consistency with Other Planning

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Salvaging and recycling of hardware and other non-renewable resources

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Prolonged temporary ramp closures

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Effects on bicycle traffic

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Recycling of AC

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What are the consequences of not doing this entire project?

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14A. Has the project been field reviewed by

District? \_\_\_\_\_ Date(s) \_\_\_\_\_

ESC - HA21 Program Advisor? \_\_\_\_\_ Date \_\_\_\_\_

14B. Project Reviewed by

District Maintenance \_\_\_\_\_ Date \_\_\_\_\_

District Safety \_\_\_\_\_ Date \_\_\_\_\_

ESC - HA21 Program Advisor \_\_\_\_\_ Date \_\_\_\_\_

HQ DLPP \_\_\_\_\_ Date \_\_\_\_\_

FHWA \_\_\_\_\_ Date \_\_\_\_\_

Type of federal involvement \_\_\_\_\_  
(Exempt, CA, or PxP)

Others \_\_\_\_\_ Date \_\_\_\_\_

15. Proposed Funding (IM, NH, etc.):

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16. Project Support:

Proposed Program FY	District PY'S			Engineering Service Center PY'S					FY Total PY'S	Other Costs (\$)
				Structures		METS and Others		Office Engr		
	Design	R/W	Constr	Design	Constr	Design	Constr			
TOTAL ESTIMATED PROJECT PY'S AND OTHER SUPPORT COSTS:									PY'S	\$*

\* Note: Dollar value of estimated specialty contracts, etc. to be shown only when applicable.

17. Remarks

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18. List of Attachments

- A. Strip Map - (may be eliminated if Vicinity Map on Cover Sheet is adequate)
- B. Typical Section(s)
- C. Proposed Project Schedule (PMCS-PYRS screen)
- D. Categorical Exemption/ Exclusion Form (or Draft/Final Environmental Document)\*\*\*
- E. Right of Way Data Sheet
- F. Scoping Team Field Review Attendance Roster
- G. STRAIN Data/Supplementary Bridge Report
- H. Advance Planning Study
- I. Rail Upgrade Priority Factors
- J. TASAS
- K. Structural Section Recommendation (Memo from District Materials Unit for widening, realignment, etc.) - (as appropriate)

Note: \*\*\* If PSSR is for project approval, the CE form or the Final Environmental Document must be attached.